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(54) Shower platform

(57) It is constituted by a single piece comprising a plate (1) having a completely flat top surface provided with a slight slope downwards at least a part of its perimeter adapted to remain flush with the floor, facilitating an access, at the said part of access there is at least one narrow oblong opening (3) communicating with a large collector located under the said plate (1) top sur-

face and which ends in a recess (5) in which a sewer (6) is open, it comprises another part of its perimeter, not designed to be an access, which may be leaning against an inwall, and along the edge of which a raised wall (7) is extending which rises above the level of the said plate (1) top surface constituting a barrier for the liquid.

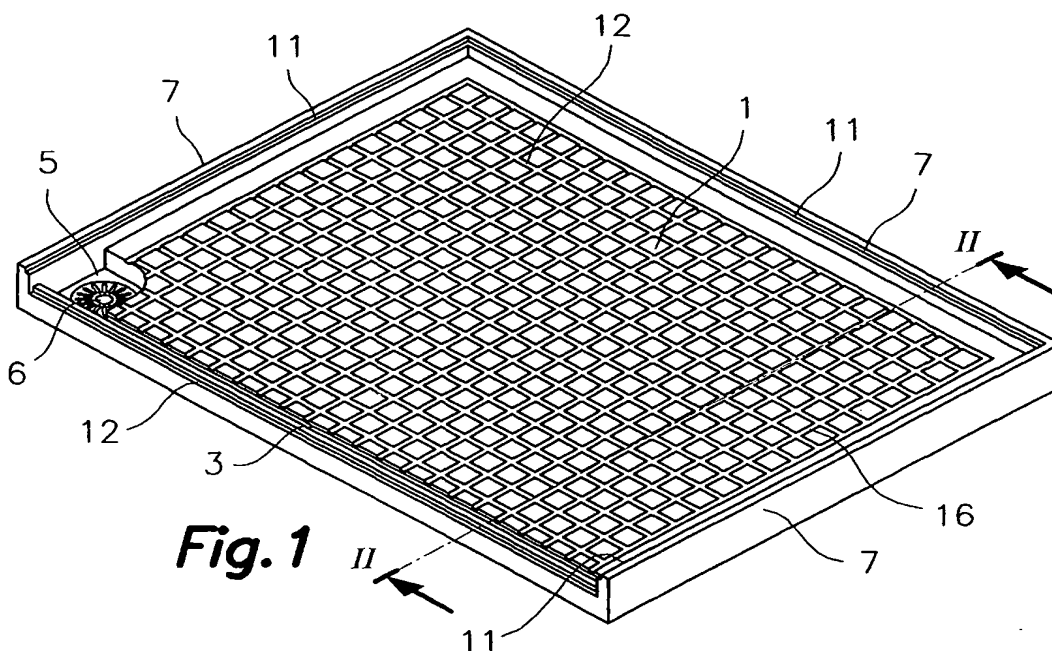


Fig. 1

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Description

Field of the invention

[0001] This invention refers to a shower footboard constituted of a single piece comprising a plate having a completely flat top surface and part of its perimeter adapted to remain flush with the floor and which may be used as an access area and another part of its perimeter leaning against an inwall, the top surface of which possesses close to the free part of the plate perimeter and at floor level, and usable as an access, at least one narrow oblong opening which communicates with a large collector located under the said plate top surface, the said collector ending in a recess in which a sewer is open.

Technical background

[0002] EP-A-0 774 226 of this applicant discloses a shower footboard of this kind in which a stepped undercutting is arranged along the whole of the perimetric edge of the said plate top surface. The function of the said stepped undercutting is to house a sealing means, which in the areas of the footboard which are not leaning against an inwall, seals off the slit formed between tiles or another pavement of the floor and the said plate top surface, the said vacuum seal remains out of reach of the liquid which is spread on the said plate top surface thanks to the fact that the said narrow oblong opening which communicates with the said collector located under the said plate top is interposed. surface.

[0003] However, at the said footboard leaning against an inwall, the said vacuum seal acts waterproofing the juxtaposition slit between the footboard and the said inwall, where typically a spongy material filler is arranged, such as an expanded polymer, tiles or elements for coating the inwall remaining supported on the edge of the external area of the said plate top surface, another vacuum seal being arranged between tiles and plate. This other vacuum seal is at the mercy of the liquid which is spread on the said plate top surface.

[0004] Although above arrangement of a double vacuum seal in the areas of the footboard leaning against an inwall secures a good waterproofing to the joint between the footboard and the inwall, it would be preferable that the second seal is out of reach of the shower liquid. In a later utility model, U-A-1045361, same applicant introduced a low socle built in the part of the plate perimeter which is not designed for the access to the footboard. The said socle has the aim to secure even more the said waterproofing between the footboard and the inwall by using a single vacuum seal, which, thanks to it being located on the top end of the socle remains in addition out of reach of the liquid which is spread on the said plate top surface.

[0005] A feature which may be improved in the two shower footboards of above mentioned background re-

fers to the drain of the water from the footboard. In fact, in above models, the plate top surface where the user is placed, is completely horizontal and is crossed by narrow grooves the bottom of which has a suitable slope for cooperating in liquid drain downwards the said narrow oblong opening having access to the sewer collector. Although that grooves have evidenced they are fully effective to drain the shower water as it is falling on the plate where the user is placed, after stopping to use the shower some water remains on the horizontal surfaces of the plate which have to be removed by hand or dried by evaporating.

[0006] The aim of this invention is to provide a shower footboard of the kind disclosed with a configuration which facilitates that all the water remaining on the plate is drained after using it.

Description of the invention

[0007] This objective is reached according to this invention, by providing the said plate with a top surface having a slight slope downwards the inlet narrow oblong opening to the sewer collector, that is to say, downwards a part of the plate perimeter usable as an access. This slight slope is preferably ranging from 0.5 to 3%, the most preferred value being about 1.5%. In this invention, the grooves crossing the plate top surface are also present and their bottoms have at least same slope as the plate or more, The said grooves also act as slip-proof element on the plate surface, preventing the possibility that the user slips on it. In order to increase even more the slip-proof action, other grooves crossing the former ones have been provided forming a mesh. The bottom of the said second grooves can be horizontal or with a slight slope downwards one or both the first adjacent grooves.

[0008] In this invention, the said characteristic of plate top surface slope is shown combined with the said socle or raised wall which is spreading along the said areas of the perimetric edge of the plate leaning against the said inwall, or which does not constitute the access to the footboard. The said raised wall reaches up to at least 2-4 cm above the level of the said plate top surface, constituting a barrier for the liquid which is spreading on it. The raised wall is topped out by a completely horizontal flat edge, therefore the height of the said edge with respect to the plate top surface is gradually increasing as it comes nearer to the narrow oblong opening connected to the sewer collector. Here again, the top limit of the internal face of the said wall acting as a barrier is topped out with a stepped undercutting. The said top edge of the raised wall is designed to support corresponding edge of the said tile or element for coating the said inwall, having arranged and joined in the said stepped undercutting a single vacuum seal for the slit of juxtaposition between the said tile or coating element and the said flat edge of the raised wall. Obviously, the said vacuum seal is out of reach of the liquid which is spread on the

plate top surface.

[0009] With this arrangement, a shower footboard according to this invention, once installed, has available a supporting plate for the user provided with a top surface slightly inclined downwards the oblong opening connected to the sewer collector securing an effective drain of the shower water, the said plate being duly surrounded by one or the other vacuum seal which remains out of reach of the liquid which is spread on the plate top surface, either because it has the narrow oblong slit interposed at the areas which are not leaning against the inwall or access areas, or because they are located at a higher level, at the top limit of the said raised wall, in the areas leaning against an inwall or a limiting partition wall.

Short explanation of the drawings

[0010] These and other characteristics and advantages will be more apparent from following detailed description with reference to the drawings appended, in which:

Fig. 1 is a view in perspective of a shower footboard according to this invention;

Fig. 2 is a cross sectional view taken along line II-II of Fig. 1, with enlarged details;

Fig. 3 is a cross sectional view of shower footboard of Fig. 1 once installed, showing mounting arrangements; and

Fig. 4 is a cross sectional view of a variation of the shower footboard of Fig. 1 to 3, once installed, showing details of other mounting variations.

Detailed description of examples of embodiment

[0011] Referring first to Fig. 1 and 2, the shower footboard of this invention is constituted by a single piece comprising a top surface provided with at least one part of its perimeter adapted to remain flush to the floor 2 (see also Fig. 3 and 4), facilitating this way an access area and another part of its perimeter, not designed to access, which may be leaning on an inwall 8 or remaining delimited by a partition wall. The said plate top surface is completely flat and possesses, close to the parts of its perimeter which are going to be free and at the floor level, a narrow oblong opening 3 communicating with a large collector 4 (best shown in the detail on the left of Fig. 2) located under the said plate 1 top surface, the said collector 4 ending in a recess 5 in which a sewer 6 is open.

[0012] In the example illustrated in Fig. 1, the shower footboard is generally rectangular-shaped, with four straight sides, three of which are designed to be leaning against an inwall 8 or closed by a partition wall 29, while the remaining side, along the edge of which is extending the said narrow oblong opening 3, is designed to remain free, at least in part, and at floor level constituting a free access to the footboard plate 1. It must be pointed out,

however, that many other configurations are possible. For example, there could be two sides designed to have two sides designed to be leaning on inwall 8, or only one and the two or three others designed to remain free and at floor level, in which case the said narrow oblong opening 3 would extend along those two or three last sides. It is obvious that the footboard could have other shapes apart from the rectangular shape, such as, for example polygonal, circular, half-circular, quadrant, inter alias. It is also obvious that the narrow oblong opening 3 could be intermittent provided that it communicates with a single collector 4.

[0013] Along the areas of plate 1 perimetric edge designed to be leaning against the said inwall 8, or closed by a partition wall 29, a typically upright raised wall 7 is extending, which is rising over the level of the said plate 1 top surface constituting a barrier for the liquid. The raised wall 7 is topped out by an horizontal flat edge 9 and at the top limit of the said internal face of the raised wall 7 bordering the said flat edge 9 a stepped undercutting 11 is arranged the functions of which are explained below with reference to Fig. 3 and 4.

[0014] The said top surface of plate 1 shows a slight slope downwards that part of its perimeter where the said narrow and oblong opening 3 is located through which the access is allowed and, therefore, the height of the horizontal flat edge 9 of the said raised wall 7 with respect to the level of the plate 1 top surface gradually decreases as the said raised wall 7 goes farther from the narrow oblong opening 3 (as it can be clearly seen in Fig. 3, 4), the said height being at least 2 to 4 cm. A usually suitable height is ranging from 5 and 10 cm. On its hand, the said slight slope of plate 1 top face is ranging from 0.5 and 3%, preferably about 1.5%. This slight slope secures a good water draining downwards the narrow oblong opening 3 communicated with collector 4 of the sewer without constituting an hindrance for, for example, persons having a reduced mobility or even moving on a wheelchair, as well during their access as for moving or staying on the footboard.

[0015] Advantageously, the dihedral on the internal face of the said raised wall 7 forms with the said plate 1 top surface has an internal rounded edge 18, while the external edge of the said part of plate 1 perimeter where the narrow oblong opening 3 is located, arranged at floor level, there exists a second stepped undercutting 12, the functions of which are also explained below with reference to Fig. 3 and 4.

[0016] The said plate 1 top surface comprises grooves 16 the bottom of which has same slope as the plate 1 top surface or more and is suitable for cooperating in liquid draining downwards the said narrow oblong opening 3 and therefore downwards the collector 4, recess 5 and sewer 6. The said grooves 16 additionally cooperate for providing a slip-proof quality to the plate 1 top surface. According to an example of embodiment of the shower footboard of this invention, as it is illustrated in Fig. 1, the said footboard comprises other

grooves 28, crossing grooves 16 forming a mesh, the bottom of the said second grooves 28 being horizontal or slightly inclined downwards one or both first contiguous grooves 16 so that the said slip-proof quality of the plate 1 top surface increases while they drain away downwards grooves 16 or main grooves.

[0017] Last, plate 1 is provided on its lower face with walls 17 or stubs acting as supporting elements for plate 1 on the base floor where they are going to be installed, on the said base floor is also installed a pavement so that the plate 1 top surface and the said pavement remain at same level. For this, plate 1 thickness approximately corresponds to the most usual thickness of the types of pavements more used, that is to say, about 55 mm.

[0018] The single piece constituting the shower footboard according to this invention is typically produced by moulding a polymeric material with additives including a foaming and fillers. However, other materials could also be produced, such as enamelled ceramic or the like.

[0019] In Fig. 3 and 4, respectively two examples of embodiment of the shower footboard according to this invention are illustrated according to two different variations of installation, which can be observed in respective cross sectional views corresponding to the shower footboards already installed.

[0020] Left part of Fig. 3 corresponds to an area of shower footboard which remain at floor level 2 or pavement, while the right part corresponds to an area of the shower footboard which remains leaning on an inwall 8. The mounting details correspond to an orientative example of installation recommended.

[0021] It can be noted that the whole of the footboard rests supported on the base floor 19 through the walls 17 or supporting stubs, preferably on bearing studs 20, bedded on a mortar bed 21. Plate 1 remains leaning on inwall 8 right part of Fig. 3) which in the example illustrated comprises a brick wall 22 coated with a rough-cast 23. Preferably on the whole outline of the shower footboard a coat 24 of insulating material, such as an expanded polymer is included.

[0022] Newly back to the left part of Fig. 3, tiles 15 or any other floor pavement will be placed on a coat of mortar 25 after placing plate 1 at its place, so that the edge of the plate 1 top surface corresponding to this side remains at same level as the surface of the tiles 15 or pavement selected top surface. It must pointed out that a vacuum seal 14 arranged between the tiles 15 of the floor and plate 1 remains out of reach of the liquid which is spread on the said plate 1 top surface due to the fact that the narrow oblong opening 3 remains interposed.

[0023] On the right part of Fig. 3, the footboard includes the said raised wall 7 which is extending along the plate 1 perimetric edge leaning on the said inwall 8, the said raised wall 7 rises above the level of the said plate 1 top surface constituting a barrier for the liquid. As it was stated above, the dihedral forming the internal

face of the said raised wall 7 and the said plate 1 top surface has an internal rounded edge 18. The said raised wall 7, acting as a barrier, is topped out by a flat horizontal edge 9, and along the internal face top limit of the raised wall 7, where it borders the flat edge 9, a stepped undercutting 11 is arranged. The said flat edge 9 receives to support it corresponding edge of tiles 10 or other coating element of the said inwall 8, being arranged embedded and joined in the said stepped undercutting 11 a vacuum seal means 13 of the juxtaposition slit between the said tile 10 or coating element and the said flat edge 9, the said vacuum seal remaining out of reach of the liquid which is spread on the plate 1 top surface.

[0024] Advantageously, both vacuum seals 13, 14 are made of a material having antifungal properties.

[0025] With this arrangement, as well the vacuum seal 14 of the free and floor level plate 1 area (on the left in Fig. 3) as the vacuum seal 13 of the plate 1 area leaning on the inwall 8 (right on Fig. 3) are out of reach of the liquid which is spread on the plate 1 top surface.

[0026] In the example of embodiment of Fig. 4, the footboard is designed to be installed within a partition walls enclosure 29, 30.

[0027] On the left in Fig. 4 the installation of the footboard on the floor 2 is identical to that disclosed with reference to the left of Fig. 3. However, here the raised wall 7 of the sides of the footboard bordering the part of the plate 1 perimeter where is located the narrow oblong opening 3 is stopped just at the height of the said opening 3 in order to allow that a partition wall 30, for example of glass, is installed on the narrow strip 31 separating opening 3 of the vacuum seal 14. This partition wall 30 can close, for example, part of the side of the plate 1 where the narrow oblong opening 3 is located, leaving a space sufficient for having access to the footboard, the said access may be additionally closed by, for example, a glazed door, a sliding partition wall or a curtain.

[0028] On the right part of Fig. 4, despite it has a raised wall 7, the footboard is not leaning against any partition wall, but it is closed on that side by a partition wall 29, for example of glass, with its lower edge leaning on the external face of the raised wall 7. This lower edge of the partition wall 29 rests on the lower branch of a L-shaped profile 32 externally leaning on a strip close to the lower edge of a partition wall 29 leaning on the external face of a part of the raised wall 7 which is not leaning on an inwall, covering the said strip. In the example illustrated, the said L-shaped profile 32 also covers a vacuum seal 14a arranged between the tiles 15 of the floor 2 and the plate 1. However, the main aim of profile 32 is to visually conceal the joining strip between the partition wall 29 and the external flank of the raised wall 7 in the event the partition wall is transparent. For this, profile 32 could have other shapes, such as "U" or "I".

[0029] It is obvious that this mounting of the right part of Fig. 4 would be also applicable in the case of the example of embodiment of Fig. 3, and that mounting the

right part of Fig. 3 would also be applicable to the example of embodiment of Fig. 4.

[0030] The combination of the raised wall 7 and the slightly inclined surface of plate 1 secures a correct drain of the shower water as it is falling on the plate preventing at same time that the water goes out of the footboard and affects the vacuum seals 13, 14, 14a.

Claims

1. Shower footboard, of the type constituted of a single piece comprising a plate (1) having a completely flat top surface provided with at least one part of its perimeter adapted to remain flush with the floor (2) facilitating an access, and another part of its perimeter, not designed to be an access, which may be leaning against an inwall (8), the said top surface possesses, close to that free part of the plate perimeter and at floor (2) level, usable as an access, at least a narrow oblong opening (3) communicating with a large collector (4) located under the said plate (1) top surface, the said collector (4) ending in a recess (5) in which a sewer (6) is open, **characterized in that** the said plate (1) top surface shows a slight slope downwards that part of its perimeter where the said narrow and oblong opening (3) is located through which an access is produced; and **in that** it includes a raised wall (7) extending along the edge of the said part of the plate (1) perimeter not designed to be as an access, the said raised wall (7) is rising above the level of the said plate (1) top surface constituting a barrier for the liquid.
2. Shower footboard, according to claim 1, **characterized in that** the said slight slope of the plate (1) top surface is comprised between 0.5 and 3%.
3. Shower footboard, according to claim 2, **characterized in that** the said plate (1) top face slight slope is about 1.5%.
4. Shower footboard, according to claim 1, **characterized in that** the top limit of the internal face of the said raised wall (7), acting as a barrier, is topped out by a stepped undercutting (11).
5. Shower footboard, according to claim 4, **characterized in that** the said raised wall (7) is topped out by an horizontal flat edge (9), adapted to receive supporting it corresponding edge of a tile (10) or element for coating the said inwall (8) being arranged embedded and joined in the said stepped undercutting (11) a vacuum seal means (13) for the slit of juxtaposition between the said tile (10) or coating element and the said flat edge (9), the said vacuum seal (13) remaining out of reach of the liquid which is spread on the said plate (1) top surface.
6. Shower footboard, according to claim 5, **characterized in that** the height of the horizontal flat edge (9), of the said raised wall (7) with respect to the level of the plate (1) top surface gradually decreases as the said raised wall (7) is farther from the narrow oblong opening (3), the said height being at least 2-4 cm.
7. Shower footboard, according to claim 1, **characterized in that** it comprises grooves (16) which crosses the plate (1) top surface downwards the narrow oblong opening (3) ending in it, the bottoms of the said grooves (16) having at least same slope as the plate (1) or over, suitable to cooperate in draining the liquid downwards the said narrow oblong opening (3), which is at least one.
8. Shower footboard, according to claim 7, **characterized in that** it comprises other grooves (28), crossed by grooves (16) forming a mesh, the bottom of the said second horizontal grooves (28) being horizontal or slightly inclined downwards one or both contiguous first grooves (16).
9. Shower footboard, according to claim 1, **characterized in that** at the external edge of the said part of the plate (1) perimeter where the narrow oblong opening (3) is located, arranged at the floor level, there exists a second stepped undercutting (12) in which are arranged, embedded and joined a vacuum seal means (14) of the juxtaposition slit between a tile (15) or pavement of the floor and the said plate (1) top surface, the said vacuum seal remaining out of reach of the liquid which is spread on the said plate (1) top surface.
10. Shower footboard, according to claim 1, **characterized in that** the dihedron formed by the internal face of the said raised wall (7) and the said plate (1) top surface has a rounded internal edge (18).
11. Shower footboard, according to claim 1, **characterized in that** the internal face of the said raised wall (7) is upright.
12. Shower footboard, according to claim 6 or 7, **characterized in that** the said vacuum seals (13, 14) are made of a material having antifungal properties.
13. Shower footboard, according to claim 1, **characterized in that** the said plate (1) is provided on its lower face with walls (17) or stubs determining a support for the plate (1) on a base floor (19).
14. Shower footboard, according to claim 9, **characterized in that** the raised wall (7) of the sides of the footboard bordering the part of the plate (1) perimeter where is located the narrow oblong opening (3)

is interrupted at the height of the said opening (3) in order to allow that a partition wall (30) is installed on a narrow strip (31) separating the opening (3) from the said stepped undercutting (12) in which the said vacuum seal means (14) is arranged.

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15. Shower footboard, according to claim 1, **characterized in that** it includes a profile (32), such as a "L", "U" or "I"-shaped, externally leaning against a strip close to the lower edge part of a partition wall (29) the raised wall (7) which is not leaning against an inwall, covering the said strip.
16. Shower footboard, according any of above claims, **characterized in that** the said plate is produced by moulding a polymeric material with additives, including a foaming and fillers.

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